

Amendment to the Claims

Please cancel claims 2 and 6 and amend claims 1, 3-5, and 7-32, as follows:

1. (Currently amended) A breast tomography scanner comprising:

a stationary chamber configured to hold fluid;

a movable chamber within the stationary chamber configured to hold fluid, to

~~move relative to~~ rotate about a vertical axis within the stationary chamber, and to receive a breast; and

an ultrasonic breast scanning apparatus having a transmitter and a receiver coupled to the movable chamber, configured to scan the breast received by the movable chamber.

2. (Cancelled).

3. (Currently amended) The breast tomography scanner of claim 2 1, wherein the movable chamber has an upper rim and wherein the ultrasonic transmitter and the ultrasonic receiver are located at the upper rim.

4. (Currently amended) The breast tomography scanner of claim 3, further including a housing affixed to the upper rim in which the ultrasonic transmitter and ultrasonic receiver are contained.

5. (Currently amended) The breast tomography scanner of claim 4₁ wherein the housing includes a recessed cavity surrounding the ultrasonic transmitter and ultrasonic receiver.

6. (Cancelled).

7. (Currently amended) The breast tomography scanner of claim 6₁ wherein the movable chamber is configured to move longitudinally along the vertical axis.

8. (Currently amended) The breast tomography scanner of claim 1₁ wherein the movable chamber has at least one hole other than at its top configured to allow fluid to flow between the movable chamber and the stationary chamber.

9. (Currently amended) The breast tomography scanner of claim 8₁ wherein the movable chamber has a plurality of holes other than at its top configured to allow fluid to flow between the movable chamber and the stationary chamber.

10. (Currently amended) The breast tomography scanner of claim 9₁ wherein the movable chamber has a bottom and wherein the plurality of holes are in the bottom.

11. (Currently amended) The breast tomography scanner of claim 10₁ wherein the movable chamber has a cylindrical wall and wherein the plurality of holes are each adjacent the wall.

12. (Currently amended) The breast tomography scanner of claim 9₁ wherein the movable chamber has a cylindrical wall and wherein the plurality of holes are in the cylindrical wall.

13. (Currently amended) The breast tomography scanner of claim 12₁ wherein the movable chamber has a bottom and wherein the plurality of holes are adjacent the bottom.

14. (Currently amended) The breast tomography scanner of claim 1₁ further including a shaft extending ~~though~~ through the stationary chamber and affixed to the movable chamber.

15. (Original) The breast tomography scanner of claim 14₁ further including a leak-resistant bearing between the shaft and the stationary chamber.

16. (Currently amended) The breast tomography scanner of claim 15₁ further including a collection chamber positioned beneath the leak-resistant bearing and configured to collect fluid that leaks past the leak-resistant bearing.

17. (Currently amended) The breast tomography scanner of claim 16₁ further including a suction device connected to the collection chamber to remove fluid collected in the collection chamber.

18. (Currently amended) The breast tomography scanner of claim 16₁ further including a leak collection tray positioned beneath the collection chamber to collect fluid that leaks past the collection chamber.

19. (Currently amended) The breast tomography scanner of claim 18, further including an alarm in communication with the collection tray and configured to sound in the event that fluid leaks onto the leak collection tray.

20. (Currently amended) The breast tomography scanner of claim 18, further including a power shut off circuit in communication with the collection tray and configured to remove power from the breast tomography scanner in the event that fluid leaks onto the leak collection tray.

21. (Currently amended) The breast tomography scanner of claim 14, wherein the shaft has an interior and wherein the breast scanning apparatus includes an ~~ultrasonic transducer coupled to the movable chamber and~~ electrical wires attached to the ultrasonic transducer that pass through the interior of the shaft.

22. (Currently amended) The breast tomography scanner of claim 21, wherein the electrical wires are protected from exposure to fluid that is placed in the movable chamber.

23. (Currently amended) The breast tomography scanner of claim 22, wherein the electrical wires are attached to a slip ring assembly mounted to the shaft.

24. (Currently amended) The breast tomography scanner of claim 1, wherein:
the movable chamber is configured to hold a fluid up to a first level;
the stationary chamber is configured to hold fluid up to a second level; and
the second level is higher than the first level.

25. (Currently amended) The breast tomography scanner of claim 24₁ further including:

a chamber filling pump configured to cause fluid to fill the movable chamber and the stationary chamber; and

a processor configured to control the operation of the chamber filling pump such that the chamber filling pump causes the fluid level in both the movable chamber and the stationary chamber to exceed the first level but not the second level.

26. (Currently amended) The breast tomography scanner of claim 25₁ wherein the stationary chamber and the movable chamber are configured such that the level of fluid within both of them equalizes.

27. (Currently amended) The breast tomography scanner of claim 1₁ further including: a table top having a top surface and a bottom surface positioned above the movable chamber; and an opening in the table top extending from the top surface to the bottom surface, positioned above the movable chamber, and configured to receive a breast.

28. (Currently amended) The breast tomography scanner of claim 27₁ further including a drain positioned under the top surface of the table and configured to prevent fluid from flowing from the stationary chamber or movable chamber to the top surface of the table.

29. (Currently amended) The breast tomography scanner of claim 28, wherein the drain is positioned between the top and bottom surface of the table top and is in fluid communication with the opening.

30. (Currently amended) The breast tomography scanner of claim 27, wherein the top surface but not the bottom surface is tapered downwardly in the area of the opening.

31. (Currently amended) The breast tomography scanner of claim 1, further including acoustic coupling fluid in the stationary chamber and the movable chamber that includes a surfactant.

32. (Currently amended) The breast tomography scanner of claim 1, further including: a drain at the bottom of the stationary chamber to drain fluid from the chamber; and a slanted surface at the bottom of the stationary chamber configured to direct fluid towards the drain.

33-35 (Cancelled).